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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/799,790	03/12/2004	Kenneth L. Smith	34121US (KDK)	8337

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Richmond, Hitchcock, Fish & Dollar
PO Box 2443
Bartlesville, OK 74005

EXAMINER

BOMAR, THOMAS S

ART UNIT	PAPER NUMBER
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3672

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	12/21/2006	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/799,790	Applicant(s) SMITH ET AL.	
	Examiner Shane Bomar	Art Unit 3672	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7,9-13 and 15-38 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 22-27 is/are allowed.
- 6) ☒ Claim(s) 1-7,10-13,15-21 and 28-38 is/are rejected.
- 7) ☒ Claim(s) 9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 12, 13, 15-20, and 32-38 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a rotatable portion of the drilling shoe to rotate relative to the section of casing, does not reasonably provide enablement for the drilling shoe itself to rotate relative to the section of casing. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention commensurate in scope with these claims. The drilling shoe is described as having a fixed section coupled to a casing section and a rotatable section coupled to the fixed section, wherein the rotatable section can rotate relative to the fixed section and casing section. Therefore, the drilling shoe itself includes a fixed and a rotatable section, wherein it is only the rotatable section that rotates relative to the casing. To claim that the whole drilling shoe rotates relative to the casing section appears to defy what the Applicant has described as the invention.

It is noted that claims 1, 21, and 22 have claimed the drilling shoe and its associated parts commensurate with the specification. Since it appears that the whole drilling shoe could not rotate relative to the casing section, and only the rotatable section can, then independent claims 12, 18, and 32 have been examined as though the rotatable section is being claimed as selectively

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rotatable relative to the casing section instead of the drilling shoe. The Examiner apologizes that this potential error in the claims was overlooked in previous Actions.

Claim Objections

3. Claims 16 and 18 are objected to because of the following informalities: claim 16 depends from cancelled claim 14, although it appears that the Applicant meant for the claim to depend from claim 12; the recitation of "sectionso" should most likely be --section so-- in claim 18. Appropriate correction is required.

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 102

5. Claims 1, 3-6, 10, and 11 are rejected under 35 U.S.C. 102(e) as being anticipated by US patent 6,899,186 to Galloway et al.

Regarding claims 1 and 3, Galloway et al disclose a drilling shoe that includes 160 and the lowermost section of casing 150 coupled to a casing section above the lower most section since it is notoriously known that casings are made up of several sections, depending on the depth of the wellbore, the shoe comprising: a fixed section 150 (the lowermost section) adapted to be coupled to the casing section above it; a rotatable section 160 telescopically coupled to the fixed section; said drilling shoe being shiftable between a rotatable configuration and a locked configuration, said rotatable section being rotatable relative to the fixed section when the drilling

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shoe is in the rotatable configuration, which is when the shear pins 310 break, said rotatable section being rotationally fixed relative to the fixed section when the drilling shoe is in the locked configuration, which is when the shear pins are intact (see Figs. 3-6B and col. 4, line 55 through col. 7, line 8). It is noted that the lowermost casing section and the collapsible section 160 must be taken as a whole to be the drilling shoe because without the lowermost section of casing section 160 would not be able to drill, or perform any of its intended functions. The weight of the casing above section 150 biases the shoe towards the rotatable configuration because it is only the pins 310 that keep the shoe from being in the rotatable configuration.

Regarding claims 4 and 5, the upper end of the fixed section is coupled to a casing section above it and the lower end of the fixed section 150 is coupled to the top of the rotating section 160 at 310, which is a pin received in a recess to prevent rotation, but which allows rotation when the pin is broken (see Fig. 3, for example).

Regarding claim 6, bit 140 is coupled to the end of the rotatable section, wherein the bit is inherently drillable since any bit is capable of being drilled. Furthermore, Galloway et al contemplate drillable materials as part of the invention (see col. 6, lines 14-21).

Regarding claim 10, splines may be used as an internal drive member (see col. 5, lines 34-38).

Regarding claim 11, the lowermost fixed section of casing is attached at its upper end to the section of casing above it by threads, as is notoriously known in the art.

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6. Claims 1, 2, 21, and 28-31 are rejected under 35 U.S.C. 102(e) as being anticipated by US patent 6,857,487 to Galloway et al.

Regarding claims 1, 21, and 29, Galloway et al disclose a method and apparatus comprising: coupling a drilling shoe 15/18 to a section of casing 12, said shoe having a fixed 15 and rotatable 18 section (see Fig. 1); using the shoe to drill a borehole 30 by rotating the rotatable portion 18 relative to the casing 12 (see Fig. 3); and after the desired depth is drilled, locking the shoe to the casing section with cement 34 so that the rotatable portion 18 is locked relative to the casing section (see Fig. 4). The weight of the string 10 biases the shoe towards the rotatable configuration because it is only the pins 14 and/or 17 that keep the shoe from being in the rotatable configuration.

Regarding claims 2 and 28, the non-rotatable portion 15 is telescopically coupled with the rotatable section 18, wherein the two sections are shifted relative to one another (see Fig. 4).

Regarding claim 30, one end of section 15 has the connector 17 projecting from it into a recess in rotatable section 18 (see Figs. 1-3).

Regarding claim 31, step (b) of claim 21 is performed while simultaneously rotating casing section 15 (see Figs. 2-3).

Claim Rejections - 35 USC § 103

7. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Galloway et al ('186) in view of US patent application publication 2004/0226751 to McKay et al.

Galloway et al teach the drill bit of claim 6, but do not explicitly teach that there is a valve in the bit for controlling flow therethrough.

McKay et al teach a drilling shoe similar to that of Galloway et al. It is further taught that a spring 360 can be added into the mud bore 46 to act as a valve for controlling fluid flow, and any number of said valves can be contemplated by one of ordinary skill in the art (see Figs. 2, 3, 9, and 10 of McKay et al). It would have been obvious to one of ordinary skill in the art, having the teachings of Galloway et al and McKay et al before him at the time the invention was made, to modify the bit taught by Galloway et al to include the valve(s) of McKay et al, in order to obtain a bit that will allow the re-establishment of circulation therethrough after a cementing operation (see paragraphs 0043-0046 of McKay et al). One would have been motivated to make such a combination because the valve will prevent cement or other fluids from re-entering the casing, wherein cement re-entering the casing could prove detrimental to the operation.

Allowable Subject Matter

8. Claims 22-27 are allowed.

9. Claim 9 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

10. Applicant's arguments filed October 5, 2006 with respect to claims 1 and 21 have been fully considered but they are not persuasive. As shown above for both of the Galloway et al references, it is the weight of the casing, or string, that provides the bias towards the rotatable configuration. With respect to claim 21, Galloway et al '487 teaches locking the drilling shoe against rotation after drilling to depth using cement 34.

11. Applicant's arguments with respect to claims 12, 18, and 32 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Ikeda et al, Sweeney, and Wydrinski teach other drilling systems of particular interest.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shane Bomar whose telephone number is 571-272-7026. The examiner can normally be reached on Monday - Thursday from 6:00am to 2:30pm. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bagnell can be reached on 571-272-6999. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.


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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



David J. Bagnell
Supervisory Patent Examiner
Art Unit 3672

tsb



December 13, 2006